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ST. LOUIS, MO.

ITEMS OF INTEREST.

No. 8.

Thots from the Profession.

ILLINOIS STATE DENTAL SOCIETY.—TWENTY-FOURTH ANNUAL MEETING.

REPORTED FOR ITEMS OF INTEREST BY "MR. M. W. J."

The Illinois State Dental Society held its twenty-fourth annual meeting in the Opera House building, Cairo.

The officers, as follows, were all present:

President—C. B. ROHLAND, Alton.

Vice-President—CHARLES HENRY, Jacksonville.

Secretary—GARRETT NEWKIRK, Chicago.

Treasurer—T. W. PRICHETT, Whitehall.

Librarian—W. B. AMES, Chicago.

EXECUTIVE COMMITTEE.

W. H. TAGGART, *Chairman*, Freeport, - - - (Term expires 1888.)

P. J. KESTER, Chicago, - - - - - (Term expires 1889.)

J. W. CORMANY, Mt. Carroll, - - - - - (Term expires 1890.)

LOCAL COMMITTEE OF ARRANGEMENTS.

J. J. JENNELLE, - - - - - Cairo.

SUPERVISOR OF CLINICS.

W. P. RICHARDS, Englewood.

ASSISTANT.

CHARLES P. PRUYN, Chicago.

In his annual address, the President dealt largely with practical issues, especially the duty of every member of the profession doing his share toward the education of the people in subjects pertaining to the teeth. With a proper understanding of the value of the teeth will come a higher appreciation of the services of the dentist; and with the cultivation of an intelligent public sentiment knavery and quackery will die of inanition. To this end there should be lectures to the public and in the schools; text-books on the subject should also be introduced in all schools, beginning with the very kindergarden.

The report of the committee on dental science and literature discussed the most recent modes of practice—the preparation of roots for crowning, immediate root filling, the relative value of exposed, or nearly exposed pulps, implantation, etc.

The committee on dental art and inventions reported great difficulty in getting particulars from inventors. Among the recent inventions and methods commended were the Knapp blowpipe, Dr. Dunn's medicinal syringes, Dr. Wooley's root and canal dryer, Bradly's adjustable matrix appliance, J. H. Reid's matrix, Newkirk's method of mounting wood-polishing points, Bonwill's method of packing amalgam with bibulous paper, Freeman's clamp and loop matrix, and tin cap for the protection of fillings, and other appliances to be on exhibition at the clinic room.

The first paper read was by Dr. J. J. R. Patrick, entitled DENTAL MORPHOLOGY AND THE ETIOLOGY OF IRREGULARITIES. Discussion opened by Dr. C. V. Black. The paper may be very briefly outlined as follows:

All life arises from simple cells, fertilized by the coalescence of paternal and maternal elements, whence arises a new cell, developing the germ, embryo, fetus, child, adult, revolving ever in the same cycle. By continued segmentation of the parent cell, three classes of cells are formed—the epiblasts, the hypoblasts, and the mesoblasts, each segmentation forming granular nucleated spheres. These spheres have their specialized functions, but all are derived from the common parent cell.

The epiblast gives rise to all the epidermas of the body, the cerebro-spinal nervous centres and the various parts of the organs of special sense.

The hypoblast is the source of the epithelium of the alimentary canal, and all the organs derived from it.

From the mesoblast are derived the muscles, bones, connective tissue, blood-vessels the dermis, the mucous membrane of the alimentary canal, etc.

To produce this great diversity of parts, the blastoderm thickens in various regions, folds and pits, pouches, sacks, tubes and processes are formed.

It is difficult to understand why the tooth should be endowed with the three organs of construction—the epiblast, the hypoblast and the mesoblast—when the latter alone contains all the organs of construction necessary for the production of tooth-substance. A cellular membrane with so much constructive ability could produce a tooth without the aid of the epiblast and hypoblast.

But many points in regard to the development of the teeth are still obscure.

The growth of the tooth from the saccular stage was traced from dissections of fetal jaws up to its complete formation, with its surroundings of cancellated bone. The results of arrested development were also shown.

Dr. Black took direct issue with Dr. Patrick on several points, though he considered the main trend correct. He said, though the microscopic examination of specimens preserved in alcohol might give such views, studies from life might modify them considerably.

A committee was appointed to witness Dr. Patrick's dissections, of fetal jaws, and report to the society, their report confirming his views in every particular.

Wednesday night, a clinical lecture was given by Dr. C. C. Carroll, Meadville, Pa., on his method of casting aluminum, demonstrated by a cast made at the close of the lecture, which being opened at the next clinic, was found to be perfect in every respect. By his process Dr. Carroll has so freed the aluminum of commerce from all impurities as to entirely obviate the disintegration which has hitherto prevented its use in the mouth. He has also discovered the method of soldering aluminum, and of making a casting very thin and very perfect, by means of neumatic pressure, casting directly to the teeth.

Dr. Louis Ottofy next read a paper on

OPERATIVE DENTISTRY.

and Dr. W. B. Ames one on

AMALGAMS.

which were discussed jointly and quite fully.

Crown-work was treated at length, and considered preferable to large contour operations, except for young patients, when the pulp should be preserved alive as long as possible. The combination of tin and gold as a filling material was highly commended, with the cements as the basis for large metal fillings. In the treatment of pulpless teeth with alveolar abscess, indiscriminate immediate root-filling was regarded as hazardous, to say the least.

As a general rule, soft gold should be used at cervical margins, finished with cohesive gold.

Dr. Wassal highly commended Hood and Reynold's cylinders, style B, as working like the Wolrab gold. He thought the heavier foils were not used as much as they should be for hard-surface work. The secret of the successful use of the cements, he thought, lay in a thorough burnishing of the surface, till it has a vitreous gloss, and also to leave the rubber dam on for an hour at least after finishing a cement filling.

Dr. Crouse made some very happy remarks on "*How to treat patients*," especially new ones at the first sitting, studying them carefully to ascertain the cause of the failures of previous operators and their operations. He prefers Kearsing's soft adhesive gold.

Dr. Ames' paper on amalgams gave the results of a series of experiments with the different amalgams. He said a really plastic gold would greatly extend its use.

The use of tin and gold is confined to few localities, and is no better than amalgam. The cements are valuable only as adjuncts. Copper amalgam is invaluable, where its color is admissible, from its non-liability to change of form; solid particles of copper, with an amalgamated surface resisting the spheroidal tendency of other metals.

Amalgamated platina incorporated with other amalgams, gives a peculiar leathery toughness and edge-strength; palladium precipitate hastens the setting of other amalgams, for which purpose it may be rubbed into the surface of amalgam fillings, to which it gives a hard surface with the aspect of clean fractured steel. Copper amalgams should be rendered plastic by heating, and be thoroughly washed with alcohol to improve the color, unless the therapeutic effects of the oxides are wanted for teeth of poor structure, when they should not be dissolved out by washings.

Dr. Taylor (Streator), said amalgams had three limitations, viz., their tendency to globular form, their color, their lack of edge strength; but that more depended on methods than on materials, in making them as useful and as perfect as possible. Copper made a wonderful amalgam in its freedom from the first defect.

Wednesday and Thursday mornings were devoted to clinics, with a report on them, by the supervisor of clinics Thursday afternoon.

The clinical operators were Dr. T. W. Brophy, a proximal cavity in the right uppersecond bicuspid, using tin and gold to the cervical border, finishing with gold, using his continuous band matrix.

Dr. W. N. Morrison, regulating appliances, and replanting a left under molar which was extracted by Dr. Chas. Pruyn, with cocaine.

Dr. J. J. R. Patrick, regulating appliance, and crowning a first right under bicuspid. For the same patient, Dr. T. L. Gilmer (Quincy), crowned the first left inferior bicuspid, making a telescopic platina and gold crown.

Dr. C. A. Kitchen (Rockford), a molar crown and anterior proximal cavity, tin filling with gold surface, using the Belding Co's. electric motor.

Dr. J. Austin Dunn, treating alveolar abscess, with the aid of his medicinal syringe, forcing peroxide hydrogen through the fistulous tracts, with two openings, one on the buccal and one on the palatine surface. The root was then treated with engenol, washed through with warm listerine, bathed in bichloride of mercury, and filled with gutta-percha cones.

Dr. D. B. Freeman, large gold buildings in mesial and distal proximal cavities in the lower first and second molars, using a double-faced matrix cut from soft tin.

Dr. W. H. Taggart (Freeport), had an ingenious and economical appliance for molding corundum disks from broken pieces.

Dr. A. W. Harlan, treating a typical case of pyorrhea alveolaris with peroxide of hydrogen, resorcin, and iodine trichloride.

Dr. J. G. Reed, a tin and gold filling in an upper first permanent molar, anterior proximal cavity, using semi-cohesive gold annealed.

Dr. K. B. Davis, anterior proximal cavity, upper second bicuspid, tin foundation, building of William's cylinders unannealed with surface of No. 60 foil.

Dr. E. D. Swain, anterior proximal cavity, right upper bicuspid, gold filling with William's cylinders annealed.

Dr. J. W. Cormany, contouring a large portion of the right upper central incisor, using the electric mallet.

Dr. Chas. Pruyn, the use of cocaine in a number of operations.

Dr. C. C. Carrol, aluminum casting.

In the discussion of the report on clinics, Dr. Crouse deprecated the use of cocaine as occasioning more pain than the operation of extracting would produce. Dr. Sitherwood objected to it as risking the formation of the *cocaine habit*, so disastrous in its effects, morally and physically. Others were exercised about the toxological effects manifest in one case, which were, however, promptly overcome by the combating remedies exhibited by Dr. Pruyn.

Dr. Ottofy advocated burs for cutting out dentine, rather than excavators.

Dr. Taylor likes Steurer's plastic gold as excellent for starting fillings.

Dr. Crouse does not like the matrix, which takes up time in adjusting, and is in the way when in place.

Dr. Moody likes tin and gold as being good for the tooth, and as saving labor and strength for the operator.

Dr. Garrett Newkirk spoke for amalgams, used with a matrix left in position till the filling is ready to finish, consolidated and finished with all the care given to a fine gold filling.

Dr. J. D. Moody (Mendota), read a paper on *The Conservative Treatment of Teeth whose Pulps are nearly or quite Exposed*, and Dr. W. A. Johnston (Peoria), one on *What shall we do with Inflamed Pulps?*

The discussion of the first of these papers was opened by Dr. Crouse, and of the other by Dr. A. W. Harlan.

The qualities essential in filling over an exposed, or nearly exposed pulps, viz: Non-irritant, moisture-exclusive and compatible with the

tissues are found only in the cements or gutta-percha. The test-fillings may be left in as long as they remain in good condition, during which time, if everything is favorable, the pulp will either lose its sensitiveness or recede, allowing of permanent operations.

Dr. Johnston recommends for inflamed pulps the administration of a saline cathartic, and the local application of aconite and iodine, capsicum plaster, or a saturated solution of iodine in alcohol. All remedies should be applied warm. He condemns the application of strong remedies which coagulate the surface of the pulp. The application of

Arsenic,	1 part.
Hydro ch. Cocain,.....	4 parts.
Lanolin,.....	5 parts.

will permit the removal of the pulp without pain if this becomes necessary.

Dr. Harlan would make every effort to save the pulp in young teeth, but had little faith in pulp capping in adult life; would apply temporary dressings for a few weeks before capping.

Dr. Crouse thinks tin is indicated, rather than the cements, for hardening dentine; would coagulate the pulp with carbolic acid and cap with oxychloride, fill to the margin with gutta-percha, and finish with tin cylinders; does not disturb pulps that are mummified.

Dr. Cushing applies copal-ether varnish to the pulp to prevent pain from oxychloride of zinc.

Dr. Morrison uses wood creasote instead of the varnish.

Dr. Noyes said the essential points in pulp capping were the cure of the disease, antisepsis, and protection without irritation.

Dr. Cummings uses as a local sedative, and after the application of creasote to the pulp: Cocaine, 4 to 6 minims; morphine, one-half grain, made into a paste, and dissolved in 20 drops chloroform. This is applied on one side of spunk and covered with copal-ether varnish, and left for from six to twenty-four hours, when the tooth can probably be filled with amalgam.

A paper on

PROSTHETIC DENTISTRY,

from Dr. S. P. Haskell, was read by Dr. Harlan, describing some of the most difficult cases met with, and the best means of overcoming these difficulties. The discussion was opened by Dr. E. D. Swain and continued by Drs. Taylor, Ames and others.

[CONCLUDED NEXT MONTH]

The universal language is the one few will use, and even they will not use it intelligently nor intelligibly. It is called "Volapuk," whatever that means. But seriously, give our orthography proper revision, and English will soon be as nearly universal as the times demand.
—*Ed. Ohio Journal of Dental Science.*

HOW DOES THE BLOOD CIRCULATE?

A. M. CUSHING, M.D., SPRINGFIELD, MASS.

I imagine some of your readers will say: That is a curious question for one to ask who passed an acceptable examination in Anatomy and Physiology more than thirty-one years ago. J. C. Dalton, one of our best authorities, says: "The arteries may be regarded as a great vascular cavity." He also says: "The entire blood is moved by the impulses of the heart." To me one of the wonders of the circulation of the blood has been that we never find blood in the arteries after death, though we do sometimes find it in the heart. The ancients supposed they contained nothing but air, so for this reason called them "arteries." I could never understand why or how the last beat of a heart, whether it emptied itself or not, should or could drive every drop of blood from the arteries. My understanding may be dull, but my inquisitiveness is not. An autopsy that I recently witnessed has shaken my belief considerably in the "hollow tube" system.

Some twenty-five years ago a person was driving a spirited horse, and as a rapidly driven horse came up beside him his own horse gave a jump forward, and as the driver pulled up suddenly he felt as if something had "given way" in the region of the heart. He was taken into a house, where he remained some hours in great distress; for years following he had attacks of a similar nature, *i. e.*, sharp pains in the region of the heart. At the autopsy it was found that the mitral valve had been ruptured, and that this valve was simply a network, or a number of longitudinal cords, worn smooth. The walls of that side of the heart were thin, the cavity dilated, and, as is usual in such cases, the other side was enlarged and the walls thickened, which is generally attributed to overwork, like a "blacksmith's arm." Aside from this the aorta for some distance was dilated, and the walls or coats thickened (probably from overwork). Can it be possible that this valve like a network had propelled the blood through the system for years?

Having seen the blood circulate through the web of a frog's foot I decided to try the experiment myself. As frogs were scarce, but flies plenty, I caught a large fly and proceeded to fasten a wing under my microscope. I was fortunate beyond expectation, and "builded better than I knew," for after I got the wing in position, and was watching the blood circulate, the fly tore away, leaving the wing in position. Imagine my surprise when I saw the same beating, wave-like motion continue, unchanged by the departure of the fly, drop after drop, granule after granule starting, stopping, starting again, till the last drop or granule had disappeared. The wing had "bled to death." I said to myself: Is not this the great secret of the circulation? Is not this why a little muscle, weighing but one-half pound, can keep ten or

twenty pounds of blood in rapid motion for years, sometimes a century, and during much of that time nearly half of that blood is being raised nearly perpendicularly? If the muscles in the arteries of a fly's wing can continue the circulation without the assistance of the heart, can they not—do they not—at all times assist the heart in propelling the blood, even acting after the heart ceases to beat, driving the last drop of blood beyond their terminal extremities?—*Amer. Homeopathist.*

THE STANDING OF OUR DENTAL COLLEGES.

DR. J. DEINELT, ALEXANDRIA, VA.

The article headed "The Standing of our Dental Colleges," in the June number of your valuable and instructive ITEMS, deserves more than a passing notice from our profession; and, as much of what you have said touches a vibrating chord within my breast, I cannot refrain from making it the basis of a few remarks in the same direction.

As one of the first requirements of a dentist is, that he should be a gentleman, it seems passing strange that discipline is not more rigorously enforced in our dental colleges, morally as well as otherwise, and that the nasty, filthy tobacco is not entirely banished from our halls of learning; also from our laboratories and from our operating rooms. There is not a calling in which its members come in closer contact with their patrons than in ours, and how any one laying claim to the appellation of "gentleman" can force his patients to inhale the disgusting stench of the filthy weed from his mouth for hours at a time, passes our comprehension.

Cleanliness of office, of instruments, and, above all, of person, should be the one thing aimed at by every practitioner of dentistry; but if these indispensable requirements are neglected by our colleges, what can be expected of their graduates?

Where, then, lies the fault, and where the remedy? You quote: "We have too many second rate professors;" to which I will add, too many colleges of like character; and in this may we look for the reason why so many graduates are annually turned loose on an unsuspecting public, nine-tenths of whom could not fitly claim the honorable title of D. D. S.

In our day most cities of note must have its dental college, presided over by such of the resident dentists as deem themselves qualified to teach, and who constitute themselves a "faculty." Now, while we will admit that most of these men are good operators, and many of them well versed in all the branches of our science, we believe many of them are poor teachers. To teach well requires much patient devotion to the subject, and aptitude in the art of lecturing.

While writing this, Professor J. D. White (our honored preceptor), the late Thomas Buckingham, and Professors McQuillen and Perry come to our mind, who, before opening the first dental college in Philadelphia, thirty years ago, fitted themselves for their high calling by giving a series of private lectures at their homes, each in their particular branch, and to which all who were at the time studying with resident dentists were invited. There are so many dental colleges that to obtain a large class of students the faculties are strongly tempted to relax their rigor.

And here you will again allow me to quote your words. You say: "And in justice to thorough students, who cannot attend college lectures, a diploma of qualification should be cheerfully accorded to *all* who can creditably undergo the final college examinations with the scholars of the school." These views should be favorably entertained by all right thinking members of our profession, who will take the trouble to give the subject a little earnest consideration.

There are many good and able men among the rank and file of our profession, who have done good and faithful work for many years, after having first undergone a thorough pupilage under some of our able pioneers, and who from causes not in their control have not been able to attend college in their earlier days, and who now, having built up a successful practice, could not spare the time to attend without serious loss to themselves and without detriment to their patrons. And yet have not these very men done much to elevate the standing of our noble calling, by having labored faithfully, earnestly and honestly in the ranks, and are they not therefore entitled to some consideration and recognition by the profession? And are they not perhaps better fitted for practicing our noble art than most of the inexperienced and often careless graduates freshly turned out from college? Are years of practical experience to count for nothing? Are not men who have been both students and practitioners for many years entitled to a diploma, if they can credibly pass with young men who have little experience and little learning?

These questions we would most earnestly commend to the attention of our societies, and through them to the dental colleges. As a reasonable diploma and examination fee would of course have to be charged, no inconsiderable sum would accrue to the colleges adopting this proposition.

Injecting Alveolar Abscess.—Dr. E. C. Brownlee gives his method of treatment as follows: First fill the cavity of a pulpless tooth with a packing of common vulcanizable rubber; charge the hypodermic syringe with carbolic acid and alcohol; push the pipe through the rubber, and inject the abscess without any leakage around the pipe.—*Cosmos*.

DOUBTS AND CERTAINTIES IN SCIENCE.

Editorial in the Ohio Journal of Dental Science.

Doubts may be developed into certainties, and suspicions may be traced along their legitimate lines till they terminate in facts. But science is not advanced by holding forth as already established those things which are still doubtful and uncertain. Let the doubts be fully expressed; the suspicions set forth as clearly as possible, and good may result; but let not claims be made in regard to them outside of or beyond their true nature.

We sometimes fear that a few of our investigators are not as careful as they ought to be in discriminating between what is known and what is guessed at. Some readers will remember a scene that occurred long ago, when microscopy was somewhat new in the dental profession. At an important meeting Drs. Atkinson and McQuillan expressed different opinions as to what was seen on a certain slide, through the microscope—not what each had seen elsewhere and at other times, but as to what was to be seen by alternate lookings at the same slide. Both had good eyesight, and were familiar with the use of the instrument; and both had the confidence of the profession. Did this show definite determination? or did it not rather teach the comparative uncertainty of the microscope research with high powers? Did it not suggest that very close and repeated observations were required to warrant positive statements? It is not strange that, at the late meeting of the Miss. Valley Association, Dr. Atkinson, alluding to this very class of researches, advised his hearers not to believe implicitly that investigators always see what they describe.

Again, that prince of microscopists, Prof. Heitzman, described something as he saw it. Other coöperating experts testified that what he claimed he saw was a deception, caused by want of proper adjustment.

Another case: Less than two years ago, the lamented Walter A. Dunn, of world-wide fame as a microscopist, prepared hemal crystals from a fresh drop of his own blood, and also from a portion of a blood clot taken from the cranium of a murdered woman. The respective crystals were put on separate slides, and when submitted to the microscope, Dr. Dunn regarded the experiment as satisfactory and conclusive. To our own eyes, not unfamiliar with microscopic research, and somewhat acquainted with the subject of crystallization, the two slides showed crystals as much alike as white beans or mustard seeds. There was no observable difference. Yet two men, both claiming to be familiar with the microscope, one having LL.D. added to his M.D., and the other a professor of histology in a medical college, declared that while the objects on one slide might be the crystals claimed, those on

the other bore no resemblance to them—no likeness to those on the other slide—and gave no evidence of being other than accidental matter obtained from debris. We were all on oath; and these investigations did not require high powers.

Not long ago, our micro-trinity,—Heitzman Bödecker and Abbott—who are entitled to and have the confidence of us all, agreed that they saw something, (never mind what,) in or through the microscope; but Dr. George Allan, long ago our pupil, but for a long time our teacher, with the assistance of the microscopist of Harvard University, could not see it in that light, though using the same slide. When “the stars in their courses” fall out, on which side must we, “tallow-dips” rally?

For present purposes it is of little concern in this affair of three to two, which is right. We are trying to convince our readers that microscopic relations, as yet, cannot, in many cases, be so accurately and reliably interpreted as to warrant the positive assertions of some bacteriologists and many microscopists. That microscopic research in reference to microbes has, as yet, all the uncertainties of similar investigations in other directions seem virtually admitted by our friend, Dr. Black, when he says, “These microbes are the smallest of microscopic objects and were of course unseen till recent times.” Yet it is common to describe them in detail with as much assurance, and more positive assertion than any would think of using in the description of horses, cows and sheep.

Some time ago the *Medical Record* had a brief item calculated to excite caution in the line of thought under consideration, caution is all we ask. Abandon the investigations? No! And don't cease to report experiments and impressions. But cease to report experiments and impressions. But cease to claim demonstration and certainty for mere investigation and suspicion. But here is the item from the *Record*:

“Dr. Mariano Semmola on bacteriology and its therapeutic relations, says: ‘We know very little of the normal condition of the blood, and biological chemistry is still in its infancy. Man cannot separate himself from these millions of parasites among whom he lives. That bacteriology may be a guide in the cure of disease, we must not only learn all we can of the microbe itself, but, more important than all, must ascertain all that is possible of the conditions of the field of culture. The science of the present knows nothing of the conditions of these fields of culture in living organisms. It is thus evident that in the present condition of bacteriology it cannot be taken as a guide for the treatment of internal diseases. The older schools of medicine spoke of organic dispositions or tendency to such and such a disease.

This expression had no meaning, but it expressed the fact. When bacteriology speaks of a need for a special field of culture it says the same thing, because we do not know of what the field of culture consists. Therefore this cannot be called a science, because a science is never composed of unknown things; it goes from the known to the unknown. If a man supposes a fact instead of demonstrating it, the phenomena of Nature are not reproduced. When he resorts to hypothesis, the power of man disappears. If Nature's laws are not respected, the telephone does not work, the electric light does not flash, the steam engine stops. The doctor, then, is the only one who pretends to become the master of Nature without knowing her laws.' Referring again to the failure of medicine to follow up a discovery in the scientific way with thorough research and demonstration, and its tendency to accept conclusions quickly. Professor Semmola says, 'modern bacteriology may lead the way to the most fruitful field of inquiry in the future, but for the present it has produced no practical results in the cure of internal diseases.' It has not, he claims, been demonstrated in what measure microbes are the causes of diseases. He, therefore, hopes that the younger generation would continue experimental researches with the thoroughness of method which the great masters have transmitted to us. They must renounce their pre-conceived ideas in medicine, and interrogate Nature without torturing her. Scientific independence must be preserved. They must not proceed without measuring their steps. He trusts that his desire for scientific independence in such researches will be echoed in this land of independence."

"If a man would be wise let him think, *think*, THINK." And let each one think for himself, and not blindly follow others. The great apostle, once Saul of Tarsus, spoke by inspiration, yet the Bereans were commended as "noble, * * * in that they * * * searched the scriptures daily whether those things were so." Listen, like them, "with all readiness of mind," but search and verify.

Responsibilities of Minors.—In the Supreme Court of Connecticut, a minor was sued for work done on his teeth; they set up the defence of infancy, and the plaintiff, of necessity, and the court held that the work was necessary and the minor liable. The minor was a ward, under a guardian, and a guardian, as you know, sustains the same relation as a parent. That is a Connecticut case. There is not a case on record in New York that I have been able to find. There may have been cases where the Court held it was necessary, and if I had a client of that kind I should certainly advise him to try it.—*Esg. Nason*, New York.

ARTIFICIAL RESPIRATION.

The dangers of anesthesia group themselves under two principal heads: cessation of respiration and cessation of circulation. It is extremely important that the operator should be fully awake to the character of the risks to which his patient is exposed, that he may be prepared to act with celerity and decision in case of accident. Too often has the history of such cases disclosed a scene of panic and bewilderment in which the most various expedients have been employed without appearance of method or comprehension of the real condition of the sufferer. The single object of the attendant should be the renewal of respiration on the part of his patient, and, to succeed, the efforts should be prompt, energetic, and long-continued.

The first expedient in anesthetic syncope is inversion of the patient. The head should be lowered as far as possible, to permit the distension of the intra-cranial vessels by gravitation. In this position the blood finds its way to the respiratory centers in the medulla oblongata, and arouses them once more to their normal function. The adjustment of the patient therefore forms one of the accessories of the process of artificial respiration.

Dr. Howard has suggested a mode of artificial respiration (*Lancet*, May 25, 1878) which is a decided improvement on the methods of Marshall Hall and Sylvester. It was originally devised for the restoration of persons who had been drowned, but the second stage of the process is equally applicable to cases of respiration arrested by anesthetic vapors.

“Turn the patient downward, with a large, firm roll of clothing under the stomach and chest. Press with all you weight two or three times, for four or five seconds each time, on the patient's back, so that the water is pressed out of the lungs and stomach, and drains freely downward out of the mouth. Then turn the patient face upward, the roll of clothing put under his back just below the shoulder blades, the head hanging back as low as possible. Place the patient's hands together above his head. Kneel with the patient's hips between your knees. Fix your elbows against your hips. Now, grasping the lower part of the patient's chest, squeeze the two sides together, pressing gradually forward with all your weight for about three seconds, till your mouth is nearly over the mouth of the patient; then, with a push, suddenly jerk yourself back. Rest about three seconds, then begin again. Repeat these movements about eight or ten times a minute. Briefly, then, the rules that should govern the situation are as follows:

“First. In every instance of syncope, threatened or actual, the head should be depressed to the utmost limit of bodily inversion.

"Second. Artificial respiration, preferably by the aid of rythmical pressure on the chest and abdomen as described above, and continued till the patient is either out of danger or unquestionably beyond all hope of recovery."—*Henry M. Lyman in "Anesthesia and Anesthetics," Wood's Medical Library.*

EROSION.

S. J. HUTCHINSON, M.R.C.S., L.D.S.

I must define first what I mean by erosion, and that is *a wasting or denudation of the enamel and dentine which cannot be explained by friction, attrition, or caries*, nor satisfactorily, by the use of acid medicines, nor by the direct secretion of mucous glands, or even by the action of the saliva.

Erosion, properly so-called, usually attacks the enamel first, and frequently is observable in its earliest stage by a circular facet like mark on the labial surface of an incisor for instance; this facet is usually somewhat depressed in the center, but can be recognized when the fact is not more than one thirty-second of an inch in diameter, and the unvarying characteristic which I claim to have discovered is a curious film of discoloration, so attenuated that it can only be seen by the aid of a strong handsplens, but when once recognized can never be mistaken, is *always* present in true erosion, but is absent from the surrounding healthy enamel. It can be scraped from the surface of the facet by a blunt burnisher, and under the microscope reveals, to me at least, nothing but small circular scales like epithelial scales, only much smaller; it is always quite black, but, as I have said, the film or coating is so thin that the blackness is only perceptible by contrast, or when aggregated by scraping.

It adheres with such tenacity that brushing the teeth with a strong brush and powder will not remove it, so that it appears actually to be an impalpable layer of changing enamel or dentine which is disorganized.

I find it present in patients of eighty and in patients of twenty to thirty. It is just the same in males and females, and in the mouths of smokers and non-smokers, in dyspeptics and in those who do not suffer from indigestion; it can be found in the pits on the grinding surfaces of molars which have to all appearances been worn down by *attrition*, but which yet have no antagonists in the opposite maxilla. It is equally present in those who take the utmost care to be cleanly and in those who do not.

It is equally present in those who use powders and in those who use only water or some liquid dentifrice, and is always just the same thin, almost invisible coating over the whole eroded surface, but never

on the healthy enamel surrounding. I regret that I have not been able to secure an extracted tooth bearing these characteristics, for singularly enough I find that caries is not at all frequent in the same mouths as we find true erosion, and another curious fact noticeable is that osteoplastic fillings often last longer than usual in these months.

That it does not seem explicable by the action of any mucous secretion is because we find it on the surfaces not always in contact with the mucous glands.

It can scarcely be explained by the action of the saliva, as we should then expect to find all parts of the teeth equally affected.

Alcoholic action alone, is almost precluded by the very singular shapes the eroded surfaces assume, though we are tempted to believe that the black film may be a sulphide.

It would be satisfactory to proclaim a bacteriological origin, and my friend Dr. Dudley Buxton has kindly promised to conduct some "culture" experiments for me, to see if he can get any definite results.

This explanation would be easily accepted, for we can understand how a center of bacterial energy could develop even on a smooth surface of enamel, and gradually spread eccentrically in patches of various shapes.

However, this blackish film may eventually be explained, I can only say in conclusion that I am not prepared to state on the present occasion, whether it is cause, result, or coincidence; but I am quite sure it is always present, and I sincerely hope on some future occasion to give the result of my further researches, and to satisfactorily account for the *black film of erosion*.—*Brit. Jour.*

Preserving Exposed Pulps.—Dr. Crouse says, nature had undoubtedly made provisions or efforts to restore or hinder the destruction of the tooth-pulp. He thought tin had more positive effects than the cements in hardening dentine. He would line the cavity with gutta-percha, capping the pulp with oxychloride in the most delicate manner, filling with tin in cylinders. He wanted the coagulated albumen, and knew of nothing better than a saturated solution of carbolic acid. After every big meeting he went home, and for a while tormented his patients with the new methods proposed, but always went back to the *old reliable*, though he did not say it would never prove a failure; but he would want to quit dentistry if he had to give up those two things—carbolic acid and oxychloride of zinc. If he finds a pulp mummified, shrunken and dry, he would not disturb it; if drilled into, there would probably be trouble afterward. In some cases it was better to take the pulp out; but it is better take the sure chance of no trouble.

THE FORMS AND ORIGIN OF THE TEETH.

V. A. LATHAM, L.R.M.S., (LOND.), ANN ARBOR, MICH.

The predecessors and the equivalents—the ancestral forms and the analogs—of the structures we know as the teeth, are found among the earliest products of the animal economy. As soon as animals begin to be predatory, they must have some means of capturing their prey. Hence we find hard organs of a chitinous—or horny—or other substance at the extremities of the appendages and around the mouths of most creatures, which are ingeniously contrived for seizing, holding, and dividing the prey. It is a great step from a beetle to a tiger, but there is much similarity in the forms and uses of their claws; and when a chetah plants his canine teeth in the neck of an antelope and sucks its blood, he repeats what a water-scorpion does when it grasps its prey, and then, by means of its rostrum, feeds on the juices. The first office, therefore, of these hard appendages is prehensile; and that office they retain, in a variable degree, to the end. In many of the shell fishes we find structures on their appendages identical in shape and use to those of insects. In the mollusca we begin to discover an approach to the arrangement we call teeth in the higher forms of life, for we find in the buccal masses of these animals what are termed odontophores. These are membranous plates, on which are arranged vast numbers of minute cones and hooklets, forming a strap-like masticating organ. These odontophores are protruded from the mouth to scrape up the food. Those who keep aquariums will have noticed how soon a snail will clean off the conferve, or seaweed, from the glass. This is done by its odontophore. This structure is also sometimes used to remove the carapace of another animal, so as to get at its soft parts for food. The variety and great beauty of these structures can be appreciated only by careful investigation under the microscope. The odontophores are probably chitinous in substance, though we might easily imagine them to be composed of true dentine, which they so much resemble.

From odontophores to the teeth of fishes is another great stride, but we still find the teeth of most fishes retain the same prehensile characteristics. In fishes we begin to discover distinct dental structures formed around the maxillary arches. It is true that in the lowest forms—such as the glutinous hag, and kindred species—the dental system is represented by only a single tooth; but as we ascend we find an almost endless variety of dental structures. So, as Sir Richard Owen says, “In form, substance, situation, and mode of attachment, fishes offer more striking modifications than do those of any other class of animals; and the anatomist finds a difficulty in obtaining a command of language sufficiently varied to portray the singular diver-

sity and beauty, and the interesting physiological relations, which are manifested in that part of their organization." But while there is such a variety in the teeth of fishes, a great many of them are in shape simple cones. The office of these cones is almost wholly prehensile, and they answer the purpose required so long as the animal lives on food that is swallowed whole. But when the food has to be divided into pieces, new forms of teeth are developed. First, we find the cones attaining great size, as in the canines of the carnivora, or flesh-eating animals, for the purpose of seizing the prey and tearing the flesh; and these tusks eventually become weapons of attack and defence. The use of these teeth is apparent even in the less prominent but more complicated cuspids of man, for we yet see the less refined class gnaw a bone by holding it in the fingers instead of using knife and fork. Next we find the cones coalescing, so as to form the "sectorial," or scissor-like teeth of the carnivora. These teeth seem to be formed expressly for the division of the flesh. Then we find another combination of cones, to form what Prof. Owen calls the "tubercular cones," which are used to crack the bones to get at the marrow, as seen in the dog, or hyena. The coalescence of the simple cones to form the teeth of the carnivorous and the omnivorous, or flesh and vegetable-eating animals, must first commence in the union of the germs from which the teeth arise, though we are unable to fully demonstrate this proposition. For we find the crowns of these teeth composed of a number of cones fused into one, over which the enamel has flowed, following the elevations and depressions caused by the points of the cones projecting beyond the general mass; and then, when the crown has formed, we find the fused tooth germ again partially separating to form the roots. But this separation is by no means regular. When the animal becomes herbivorous, or vegetable-eaters, a yet greater difference becomes necessary; for there must be large and flat teeth with rough surfaces to grind the food. Therefore, a varied, involved and complex dental system prevails among the hoofed quadrupeds.

The teeth of the elephant, cow, horse, rhinoceros, ibex and wappiti deer give a good illustration of their general structure. The coalescence has in these teeth been carried much further than before, and it has produced an entirely new combination in the hard parts of the tooth. We have in the first place the same kind of coalescence whereby several cones make up one tooth. But, in addition to that, we have several of these teeth, each with its own germ, uniting to form one huge grinder. Thus we see in the horse's tooth no less than five teeth united to make one. This union may be described as if my fingers and thumb should be joined just where they meet, and then

a substance should flow all through the interspaces and around the outside, as the cement flows into all the interspaces of these five teeth and all over the crown, forming a square tooth, as in the horse. By this arrangement, instead of the enamel being on the outside, as in the human and many other teeth, it runs all through this complex structure. The effect of this arrangement is that the cement gets worn away almost as soon as the tooth is erupted, and continues to wear down faster than the other structures; then the dentine wears away; the enamel, as the hardest part, wears last, which always leaves on the grinding surface of the crown an uneven surface, particularly adapted for grinding the food. Look at the sharp projections in the tooth of a deer or a rhinoceros. What cannot such arrangement do in the way of mastication? The deer and the ibex have teeth made up of four instead of five teeth, as in the horse. Not only do we find these modifications in the arrangements of the hard parts of the teeth in the herbivora, but there are other important changes. In horses the canines, which are so large in the carnivora, are very small and useless in the stallion, and merely rudimentary in the mare. In the ox, sheep, antelope, etc., modification has gone still further, for these have neither canines nor incisors on the upper jaw; and the canines in the lower jaw, if indeed they can be called canines, are more like incisors. Where the upper incisors are absent, a rough pad is developed for the lower teeth to strike against, as may be seen in any cow's mouth. Instead of huge canines, claws, etc., the herbivora are provided with horns, antlers, etc., for defence; or when it is only necessary to escape from an enemy, they have acquired fleetness or cunning. The appendages of insects and shell fish are frequently cast off; and, as with the odontophores and the teeth of fishes, are being constantly renewed. But in the higher forms of animals, there is generally but one renewal, so that when the permanent teeth are once in place they must suffice.

The elephant is a notable exception to this rule; for of the six huge molars he has on each jaw there is never more than one, or at best two partially, in place and use on each side at a time. The series is continually in progress of formation and destruction, of shedding and replacement, the new tooth succeeding the departing one horizontally from behind forward, none being displaced by vertical successors. Both male and female elephants have tusks. These are really the incisors, though in structure they are not quite like ordinary teeth, but consist of the modified dentine called ivory. This is recognized by striae proceeding in the arc of a circle from the circumference in opposite directions, and forming by their decussations curvilinear, or lozenges, much resembling the engine-turning on a watch case.—*Ohio Journal of Dental Science.*

EVILS OF EXTRACTING BABY TEETH.

DR. C. C. CORBETT, EDWARDSVILLE, ILLINOIS.

Many dentists do a great injury to their patients by extracting their teeth too early; young operators are especially liable to make this mistake. For instance, a father brings his little daughter to you, age six years, four months. The inferior centrals have made their appearance on the palatal aspect. He is anxious she shall have straight, pretty teeth, and places her in your hands. You, properly, extract the temporary centrals, and instruct him to return with her in four months. At this time one central has about reached its position in line, and the lateral on the same side has made its appearance. The other central is still considerably inside the arch. Then the young operator, and perhaps some older ones, thinks these teeth must be straightened at all hazards, and he extracts both temporary laterals; one to give room for the permanent lateral, and the other for the permanent central.

What is the result? The central comes into line and occupies nearly the entire space that should have been allotted to the lateral, which soon makes its appearance either posterior or anterior, to the temporary cuspid, which has to be extracted to give it room. The result is, in a few years, the permanent cuspid has to erupt outside of the arch.

A temporary lateral should rarely be extracted to make room for a permanent central, and a temporary cuspid seldom, if ever, to make room for a permanent lateral. If there is a crowded condition, let it be for a year or two, and generally it will expand and develop the arch sufficiently to make room for the permanent teeth. There is one other tooth, which if it is extracted too early, will invariably bring about a crowded condition of the permanent teeth, and that is the temporary second molar, which will allow the first permanent molar to come forward and take the place of the second bicuspid.

This tooth—the temporary molar—should be retained, if possible, till the child is eleven or twelve years of age.

We can not lay down any rigid rules for the extraction of baby teeth, but we must rely on our own judgment. Let us not be careless or neglectful, because on the management of these teeth depends, to a great extent, the value of their successors.—*Dental Review*.

In Peroxide of Hydrogen we probably have our best and most elegant disinfectant. It is a very unstable compound, readily yielding its extra atom of oxygen, which proves destructive to sulphuretted hydrogen gas by its union with the sulphur, forming dioxide, and the elimination of free hydrogen gas.—S. ESCHELMAN.

SYPHILIS CURED.

DR. J. W. PLUMMER, LOUP CITY, NEBRASKA.

J. B., male, aged 28 years, medium height, strong frame, and good constitution, came with left upper incisor missing. About the apex of the root was a denuded surface of necrosed process about two lines in diameter, surrounded by diseased suppurating tissue constantly discharging an offensive pus which escaped into the mouth and left nostril, producing a condition disgusting to friends and patient. The other three incisors hung loosely by the soft integument and were of no value. The condition was the sequence of secondary syphilis. The three loose incisors were extracted, and with a pair of root forceps the sequestrum process was seized and lifted from its bed, being of a rough, jagged form about a half inch in diameter. The sinus now opened freely into the left nostril, the hemorrhage was easily controlled, and the dressing completed with dilut. Phenol Sodique. At the expiration of a week the condition was not improved, the parts being swollen, looking angry, with a full discharge of pus, distressed appearance of countenance and appetite poor. The parts were injected with peroxide of hydrogen and dilut. sulphuric acid, applied 1 part acid to 3 of water, from which no benefit seemed to be derived. Again cleansed with peroxide of hydrogen and followed with bichloride of mercury solution. Still no improvement. At the fourth sitting the peroxide of hydrogen was freely employed and the cavity packed with iodoform, using the dry powder and covering the orifice. On the return of patient, at the end of another week, the change was most marked and gratifying. The parts had assumed a healthier appearance and the secretion of pus was diminished accordingly. The peroxide and iodoform treatment were continued once a week, and, with the loss of a portion of the nasal spine, at the end of thirteen weeks the recovery was such that we were able to supply a substitute for the lost incisors on celluloid, which has been worn since with satisfaction.

The constitutional treatment was conducted by my medical colleague, Dr. Geo. W. Kittell.

With such clinical evidence before us I cannot understand how eminent practitioners can be so skeptical in regard to the benefit derived from the proper application of remedial agents. Ignore it as we may, the medical aspect of our calling is constantly augmenting. The intelligent, competent dentist is daily assuming responsibilities and treating conditions which were formerly relegated to the general practitioner, and with results much more satisfactory than were formerly attained. Hence the importance of young practitioners entering our ranks being well indoctrinated into those broad principles of medical science that will enable them to measure up to those grave responsibilities which public appreciation is devolving on them.

THE TEETH AND THEIR VARIETIES.

V. A. LATHAM, L. R. M. S.

The teeth are not bones. Bones are developed by the metamorphosis of cartilage and ordinary connective tissue; and in both the cells are converted into lacune, or what Kölliker calls bone-cells; but the teeth are dermal structures. That structures do arise from the dermis is apparent in the hoofs and hair of animals, the carapaces or of some of the crustacea, or the scales of fishes, etc. Indeed, according to Sengenbaur, the ancestry of the whole dental system can be traced back to the placoid scales of fishes, and this view has been adopted by the best authorities. Of these scales Sengenbaur says "the structure of dentine, are covered by enamel, and are continued into a plate formed of osseous tissue; therefore, he calls them "dermal denticles." But how do structures that originate on the external surface for protection eventually develop on the internal surface for purposes connected with digestion, and assume such different forms? This is not difficult to understand when we remember, first, that the mucous membrane is only a differentiation of the skin; and, second, that constant variation to suit varying conditions is the order of life. As scales are formed on the skin of fishes, we can see how easily they might extend beyond the border line which divides the external from the internal coating and spread over the mouth. Now, once begin the development of hard substances in the mouth, if we but allow the inconceivable ages which the comparative anatomist tells us have been required for the development of the higher animals, and the long succession of ever-changing environment which all animals are constantly passing through, then it is not difficult to imagine how the primitive forms become gradually modified from dermal scales into dermal cones, and then, starting from the simple form, become further modified in the way I have described, so as to become adapted to the various kinds of work they have to perform. In this way I think we can account for the varieties of the teeth, while they retain some of their primitive characteristics. The teeth are fixt in their position in the mouth by various methods, which pass by gradational forms into one another, so that a simple as well as absolutely correct classification of these arrangements is impossible. But we may reduce the modes to four general forms, and say it is either by means of attachment by fibrous membrane, or by a hinge-like arrangement, or by direct adhesion (or ankylosis) to the jaw, or by implantation in the bony sockets which arise from the maxillary bone for that purpose. Most fishes, particularly the sharks and rays, afford an excellent example of the first-named method, whereby teeth are held solely by the tough mucous membrane which covers their variably calcified jaws. In

fishes of predatory habits there are found teeth which yield to pressure, and then, by means of a dense fibrous elastic ligament, radiating from the side of their base on the subjacent bone, return into their position with a snap. The use of these hinged teeth is to catch the prey, and also, as in the pike, for swallowing when caught. Again, a tooth is so completely in unison with the adjacent bone that it is difficult to see with the unaided eye the line of juncture.

Lastly, there is a special development of bony sockets, which arise from the maxillary arches and envelop the roots of the teeth, as in the human jaw. These sockets are perfectly subservient to and dependent on the teeth, and soon become absorbed when the teeth are lost. There is no anchylosis or fusion of the roots of the teeth to the bone, but between the roots and the "alveoli," as the teeth sockets are called, there is a highly organized membrane known as the "alveolar dental periosteum." This is the membrane which is severed when the tooth is extracted, and it plays an important part in producing the pain from a devitalized or so-called "dead tooth." The notion so much promulgated by the uninformed dentist, that a "dead" tooth will not be the cause of pain, is founded on a misapprehension of the facts. This membrane serves as a cushion to the tooth, and is also its attachment to the socket by means of the prolongation of its vessels into the walls of the socket on the one side and the cement on the other. This accounts for the necessity for a covering to the roots of the teeth, which is not so dense as the dentine.

Though we have seen that the beginning of dental structures is in the scales of fishes, we have not now the time to trace the various modifications of the substances of which they are composed up to the teeth of the higher animals.—*Ohio Journal of Dental Science.*

Hints Bearing on Fees.—Always make a charge for each service. This gives it a business value in the eyes of the patient.

The charge should always be just and reasonable; then no deduction is necessary.

Insist always on full payment, based, if necessary, on itemized accounts.

Never allow sentiment to interfere with business. The "thank you" is best emphasized by the silvery accent of chinking coin.

Always charge a fixed fee, and never trust to his generosity, or embarrass him by guessing an amount that would be satisfactory to you. It is much like firing with a kicking gun at a black cat in the dark.

Render bills at short intervals, and be in earnest when you commence to collect them.—*Medical Record.*

DEVITALIZING DECIDUOUS TEETH.

DR. C. C. CORBETT, EDWARDSVILLE, ILLINOIS.

It is important that every dentist be well informed as to the time the roots begin to absorb. Especially those who are in the habit of using arsenic cannot lay too much stress on this phase of the subject. Of course, this is obscure, and the variance is great in different families, and in different constitutions; yet we ought to make what might be considered a safe approximation of the time, so as to know with some certainty when to use this dangerous drug.

I think we would be comparatively safe in following the table given us by Prof. C. N. Pierce, in one of his recent essays. He estimates the retrograde metamorphosis as follows: "The roots of the central incisors begin to be absorbed when the child is about four years of age. The lateral incisors follow a few months later. The first deciduous molars begin about the sixth year, the second molars about the seventh, and the cuspids about the eighth year."

There are many dentists who think they cannot destroy the pulp of a tooth with any other drug than arsenic. For their benefit we might consider the above table relatively correct, and arsenic used after the time mentioned in the table should be regarded as dangerous. A dose sufficient to devitalize the pulp of a deciduous tooth, one sixtieth grain, which is very small, might not endanger a child's life; but it might bring about such a condition at the apex of the root as to necessitate its extraction.

In most cases I have found that several applications of carbolic acid, or a solution of nitrate of silver have been sufficient for this purpose, so I do not resort to the use of arsenic, generally, in the treatment of the temporary teeth.

After we have destroyed the pulp of one of these teeth, it should be removed and the root filled just the same as for a permanent tooth, except where the child has reached the age given in the above table. Then great care should be taken not to crowd a lot of filling through the root. The pulp canal is generally large enough to admit of the introduction of a small instrument with a turned point, by means of which one can generally find just how much of the root has been absorbed, and then fill it accordingly. Your operation should be recorded, with remarks, and the parents informed of the time your patient should return, which should be at least from four to six months earlier than would have been necessary had the tooth not been devitalized, for the purpose of watching the advancement of the permanent teeth.

Where the deciduous teeth are dead when they are brought to you for treatment, and if the tooth has not been aching, and the

opening into the root has been closed with decalcified dentine, it is pretty safe to fill without reopening the pulp canal. But if the root canal is open it should be thoroughly cleansed and disinfected, using as much care to avoid an abscess with these teeth as you do with their successors.—*Dental Review*.

The Sticker!—Canada Balsam is very tenacious and sticky. Dissolved in chloroform it *unites* with any *clear, dry surface*! Age does not injure its sticking qualities. If several years old it will dry into a hard, resinous substance, but easily dissolves in chloroform. Less freely in ether. It will *firmly anchor* any foreign substance to a clean, dry cavity. This sticker is incompletely soluble in bisulphide of carbon, glacial acetic acid, acetone, absolute alcohol and the secretion of the mouth. The writer has had an experience with balsam of fir for the above purpose over fifteen years. *It is reliable*, and of great value to patient and operator.

If one has reason to believe that the septum is very thin between the pulp and proposed filling, then make one or two applications and allow the chloroform to evaporate, then one will have a most excellent *non conductor* between pulp and any metal or other filling.

Let it be remembered, one does *not need* retaining pits, if tin and gold are combined and used as above.

Again, fillings started in this way are *firm* and *solid*, on which cohesive gold *can be welded* with *perfect security* and *ease*! Make the solution in a wide mouthed bottle. The reason is obvious.

It is well known that the plastics, the oxychloride and oxyphosphate are apt to dissolve out sometimes quite fast at the cervical border of a cavity. To prevent this, make your proximating wall and neck border of your cavity out of red or white gutta-percha. You can build up a *thin* shell of gutta percha after you have anchored it with the sticker. One can do just as he pleases with the 'percha. The latter will not dissolve away at the neck of the tooth and the other cements will wear better where any attrition comes. Why! this sticker will bring sunshine, joy and money into any honest dental office! Try it!—*Ed. in Archives*.

Association.—I am pleased to say from my observation, and from what I have gathered from experience of others, that the broad liberal spirit of good-will and brotherly feeling is rapidly spreading among us, and has been brought about by our frequent meetings in the dental circles. I have been glad to see the growing respect and dignity manifested. Men have learned that no good, substantial structure is reared on the ruin of another. The way to grow socially, as dentists among ourselves, is to attend the city, district and State society meet-

ings. In these we are brought together to contribute our mite to the general good. We get new ideas and are better men for this intercourse. Our societies are elevating in their tendencies, and are growing more and more into dignified, useful institutions. The greatest evil to guard against is the fondness for self-display, and the greed for official position. I could not help feeling, when I attended a great Dental Association, that the principal question seemed to be, for whom are you going to vote? As if the Association was only a body of wire-pullers, and its principal object the election of some one to office!

Shaping Cavities.—It has been a tradition among many dentists (not founded on any mechanical law, but the contrary) that the interior of a cavity prepared for filling should be considerably larger than the orifice. The consequence is that the gold is not consolidated against the interior walls, but only against the walls of the orifice; and we know the state in which such fillings are found a few years later, if by chance even a microscopic defect is left anywhere in the mouth of the cavity. We know that in upper bicuspid the largest part of an proximal cavity is generally high up, near the smallest part of the tooth—the neck. There is a general indisposition to cut away overhanging portions; hence the justice of the remark made by an experienced instructor, that “a man who could fill bicuspid teeth so as to save them was already a good dentist.” This results in the strenuous insistence, on the part of the best operators, that the walls of a cavity should be as nearly perpendicular as possible, leaving a sort of box, rather than a jug, to be filled, every portion of which is accessible to the direct stroke of the instrument.—E. A. BOGUE.

The Rotary Method in Amalgam Filling.—In the Chicago Dental Society, the clinic of the amalgam filling, by Dr. A. O. Hunt, of Iowa City, Iowa, was interesting as a demonstration of the method of using amalgam, where the proportion of mercury to the metal is so adjusted (ten grains of amalgam to seven grains of mercury) that when the metal was amalgamated and placed in the cavity in experimenting, the mercury could not be forced to the surface, as was tested thoroughly with intense pressure by Dr. W. N. Morrison, of St. Louis. The filling in this condition was almost as firm as when filled two or three days by the other method. The amalgam is put into the cavity by burnishing, with a set of smooth faced amalgam instruments, Dr. Hunt's own pattern, the object being to burnish each piece on the firm portion of the filling, making it a hard, compact mass.—*Dental Review*.

CREOSOTE VERSUS CARBOLIC ACID.

There is a curious lack of comprehension of the wide difference between creosote and carbolic acid. Some of our most intelligent men use the terms interchangeably and as synonyms. The fact is, the two articles have little in common. As medicinal agents they are, or should be, employed for widely different purposes. And yet, dentists frequently recommend the one when they mean the other. Creosote has but a very unimportant place in the dental pharmacopœia, while carbolic acid is, perhaps, employed more frequently than any other remedy. There are very few of the dentists who so commonly advise its use in their writings or speeches, who even have it in their cases. Indeed, it is not fit for exhibition in the operating-room, because of its oppressively vile and penetrating odor. Let us review some of the characteristics of each, that it may be judged which of the two is best adapted to dental wants.

Creosote is obtained from wood, carbolic acid from coal tar.

Creosote, when pure, is a liquid, carbolic acid a solid.

Creosote will not coagulate collodion, carbolic acid will.

Creosote will not produce a blue color by reaction with muriatic acid, carbolic acid will.

Creosote forms solutions with eighty parts of water, and with one-tenth of one part, carbolic acid with twenty parts.

Creosote is not a cauterant, carbolic acid is.

Creosote is a narcotic, carbolic acid is an irritant.

Creosote is an oil, carbolic acid is a phenylic alcohol.

Creosote has for its formula $C_8 H_{10} O_2$, carbolic acid is composed of $C_6 H_5 HO$.

Creosote is a soothing application to ulcers and for putrid sore throat, carbolic acid is exceedingly irritating.

Creosote is styptic and astringent, carbolic acid is not.

Finally, and most important, creosote is not a germicide or a disinfectant at all, while carbolic acid is one of the most powerful with which we are acquainted.

Will not dentists take note of these differences, and use and recommend the two drugs intelligently? Medical men who know the characteristics of each, are not impressed with our chemical and pharmaceutical lore when they hear us prescribing creosote for the septic canal of a tooth.

Opening the Foramen.—It is hardly, if ever, necessary to pass any instrument larger than a hair broach through the foramen. This will unchoke the natural opening and admit the free passage of any anesthetic used, which is all that is desired.—*F. V. Clark.*

PATENT-RIGHTS AND THE DENTAL PROFESSION.

The question, "Is dentistry a profession?" is no longer argued even by intelligent people outside of the profession; it is admitted everywhere. Frequently, however, we see very quaint and curious ideas of what dentists as professional men should do and what they should not do in order to maintain their professional standing. The most unique idea of all is, that appliances invented by the ingenuity of the dentist must not be patented, and if he does secure such patents, he must at once be dropt from the professional ranks. Now the fact is, the action of patenting any appliance or method has nothing to do with the professional standing of any dentist; it is not *per se* an unprofessional act.

A man's professional standing, we are happy to know, is determined by his intelligent, competent procedure in professional ways, and by the noble and gentlemanly character which gives direction to every phase of his life's work, and little by the fact that he has or has not taken out a patent on any of his inventions.

In the name of all that is logical, we wish candidly to ask all reasonable persons if a dentist has not as good a right to receive payment for an invention over which he has spent time, thought and money as he has to receive payment for any of the usual operations in dental practice? His invention represents time, outlay and brain power just as much as does the gold filling which he inserts, and why should he not receive the compensation which a patent secures?

Our authors, our literary men, secure copyrights on their books and manuscripts, and yet no one is so dull and illogical as to accuse them of unprofessional conduct. Certainly not; they deserve protection. Now the patent-right to the inventor is just the same as the copyright to the author, and they both have a legitimate right to secure the benefits coming with such protection, without being called to account for being "unprofessional" by writers who cannot be said to have grasped the true meaning of the term.

Patent-rights, as well as copyrights, are productive of much injustice and subject to many abuses, but no reasonable man will argue from this fact that there is anything belittling or unprofessional in securing a patent right or a copyright. We honor the man who gives his inventions to his profession without price as highly as do any of our contemporaries, but we strongly deny that a dentist who secures a patent can—on that account—be called unprofessional.—Ed. in *Western Dental Journal*.

Cocaine as an Anæsthetic received a decided "black eye" at the meeting of dentists in Cairo, Ill., recently.

A MYSTERIOUS TOOTHACHE.

HOMER, LA., June 9, 1888.

DR. T. B. WELCH, Vineland, N. J.

Dear Doctor:—I have a young lady patient that sometimes complains of toothache in the first and second lower left bicuspids, are *perfectly sound* apparently, not crowded, either of themselves or the adjoining teeth. The gums are as healthy looking as I ever saw; there is no inflammation in the mouth anywhere. She had complained for sometime in this way, and sometime ago I put in nine gold fillings for her. I painted the gums around these two teeth with equal parts of tincture of iodine and aconite, and she had no more pain for several weeks; then returned with toothache. The two gold fillings in the sixth and twelfth year molars of the same jaw I removed, and used Caulk's Cement for filling the cavities about one-half or two-thirds full, and then completed the filling with gold. Still at intervals they give pain, though they never become elongated, and there is never any additional pain caused by tapping those teeth at any angle, not even when it is aching; nor does constant pressure seem to lull the pain while it is aching. The teeth were never filed between, nor has she ever had any work done except what I did, and two amalgam fillings, one each in the sixth and twelfth year molars on the right upper jaw, which have been there for several years. Change of weather does not affect them, as they begin aching during a bright, warm spell of weather as likely as a damp, cold, disagreeable spell, and usually begins aching very late in the evening, and generally ceases before next morning; but a few times it has continued till 11 or 12 o'clock the next day. What is the cause?

J. F. JOHNSTON.

Disease of the Antrum.—About two months ago a German lady, sixty-five years old, very anemic, came to me for treatment of the right antrum, which was enlarged one third of its natural size. There was an opening through the centre of the roof of the mouth about half of an inch in diameter. I extracted seven roots of molars which had been broken off. I waited about ten days, but saw no change. I then made an opening through where the second bicuspid had been, and took from the antrum a fungus growth, which had been causing considerable pain. I washed thoroughly with warm carbolized water four or five times, and gave a tonic of iron, quinine and strychnine, which benefited her much. The enlargement disappeared, but there was no change in the opening in the roof of the mouth. In two weeks I enlarged the opening a quarter of an inch, making it double its former size. This I cauterized, and continued the warm carbolized water wash and tonic. The opening has closed and the patient is in good health.—C. T. LOONG, D.D.S., Austin, Texas.

ASBESTOS.

DR. L. P. HASKELL, CHICAGO.

This valuable article, so necessary in the dental laboratory, and specially in the construction of continuous gum work, has of late been anything but satisfactory. For nearly thirty years I had no difficulty in securing a supply from the S. S. White Company that was every way satisfactory. All at once the supply gave out, and no more could be found, but in its place came a long silky fiber, which was difficult to mix with plaster, and difficult to cut when hard. I have looked for several years for some of the old material in Philadelphia and New York. Last fall, while in New York, I found what was the cause of this condition of things. There is an abundance of asbestos in this country, but it is generally of a coarse fiber, and as the material is used principally for making fabrics, they need the *fine* fiber, and so neither import nor make use of the American article.

I am glad to say, however, that at last I have found the article I want in Chicago, and is of excellent quality, short, coarse fiber, and shall notify the dealers in dental goods where it may be found.

Rapid Burring.—Dr. Whitefield demonstrates the advantage of the Rapid Engine; as the name indicates it is devised to run at a high rate of speed. With it excavating is done with ease and rapidity, the sensitive portions of the cavity being prepared with so little pain to the patient that they hardly realize that the work is done.

Dr. W. uses a bur devised with special reference to this class of engines, the blades of which are set at a greater angle and wider apart than the ordinary bur.

The Rapid Engine with properly cut burs appears to be an obtundent. The case in the clinic was a sensitive cavity in the buccal surface of a first molar. A bur was selected about half the size of the part of the cavity to be operated on. With one positive, firm, but light sweep of the bur, the cavity was cleaned of the decay and in an instant of time, as the engine was running at about 5500 revolutions per minute. The patient experienced no more pain than he did in probing for the cavity with his toothpick.

For hard enamel, a differently cut bur is used, one with blades parallel to the enamel rods, and with a speed of from 200 to 1000 revolutions per minute.

In using polishing disks, the speed at which they work best, and produce the least friction is from 3500 to 7000 revolutions per minute, according to quality of the disk.

Where it is necessary to cut out an amalgam filling, the rapid bur will cut with astonishing ease. A large filling was removed as if it was but softened dentine.—*Dental Review*.

Receiving Children in the Dental Office.—A mother calls at your office with her four or five-year-old child. It has the idea—perhaps from instinct, or more probably from hearing its elders tell of the suffering they have endured while in the dentist's chair—that it is going to be dreadfully hurt, and is frightened nearly to distraction. You come in from your operating room—and right here, let me say, is where your skill is needed as much as at the chair—perhaps you are not feeling in the best of humor, and I fear the first thought that enters the minds of too many of our dentists is, that their time is too valuable to waste with this fretting child. To be sure, it may not be as pleasant as might be desired, and your remuneration may not be as much as your services are worth; but was money your sole object when you entered the dental profession, or did you have a nobler and higher purpose in mind, to do what good you could for suffering humanity? Unworthy the thought that dwells one moment on such sentiments!

The first step necessary is to gain the confidence of your little patient. You should approach it with a cheerful smile and a pleasant word and, if it is frightened, you cannot spend ten minutes more profitably than in becoming acquainted; for if you do not gain its confidence and treat it with much care, being particular never to practice any deception, it will for years hate a dental office, and only enter one as a last resort, and you have done it a lifelong injury.—C. C. CORBETT.

Extension of the Dental Term.—The further extension of the dental college term is talked of in some quarters, which reminds us of a remark made by one of the most experienced teachers in the profession. He had been succeeded in a well established school by a man of his own teaching, and in answer to our question as to how his successor would get on, said: "He'll have trouble to get through this term." "How so?" "He'll tell all there is of it in less than three months. My own trouble consisted in finding something to say that I had not already said, and at the same time avoid letting the students know that I had overdrawn my account." "Is that why you bombarded us with two lectures on 'Epochs in Dentistry?'" "Just so." More work and less talk would come nearer meeting the average student's requirements.—*Odontographic Journal*.

Two Geniuses.—At the meeting of the American Dental Association in August, Dr. Knapp, of New Orleans, and Dr. Mollotte, of this State, showed more marvelous products of their skill in prosthetic dentistry than had ever been seen before. The demonstrations of both of these gentlemen, as well as the exhibition of their appliances, entitle them to rank as artists as well as wonderful inventors.—*N. W. Kingsley*.

The Pre-Natal Cause of Caries.—Dr. C. C. Corbett, of Edwardsville, Ill., says: In former years, the pregnant woman was taught that her diet should consist of the most substantial food, that she might become the mother of a strong, healthy child; now, while pre-natal culture is steadily advancing, it is directed to the mental, to a much greater extent, than to the physical development.

We find many mothers following the instructions of a book, entitled "Tokology," written by Alice B. Stockham, M.D., of which over 100,000 copies have been sold in the last five years, which teaches that the diet of the pregnant woman should consist principally of fruits, and that she should avoid everything that goes to make up osseous structure, and the child's system should be built up from its own diet. The result of such teaching is children with deficient lime-salts and phosphates in their organism.

That this condition has a worse effect on the deciduous teeth than on the other osseous structure, I think, cannot be doubted, when you consider that the permanent teeth have years in which to develop, and the diet of the child may partially supply them with the necessary lime-salts and phosphates. But the deciduous teeth having been deprived of these elements during fetal life and, considering their advanced stage of development at birth—the crowns of the temporary incisors being entirely formed, and those of the cuspids and molars following three months later—the texture of these teeth can be changed little after this period. Can we wonder they are of a soft nature and easily attacked with decay?—*Dental Review*.

The Student's Manual and Hand Book for the Laboratory.—By Dr. L. P. Haskell. Published by Welch Dental Company; 49 pages, well illustrated.

Had we been told simply that Dr. Haskell had written a book we would have said it is valuable and very practical, from our knowledge of the man. A copy of the book proves this conclusively. For the laboratory it is the best out—a ready reference, a teacher. Here is the contents: General Principles; Laboratory; Tools and Appliances; Blowpipe, its use; Impressions; Plaster Casts; Dies; Swaging Plates; Fitting Plates; Clasps; Investing, Backing and Soldering; Finishing Metal Plates; Preparation of Gold and Silver Plate, and the Making of Solders; Attachment of Teeth to Plate; Relative Value of the Various Materials for Plates; Continuous Gum Work; Furnaces; Cast Metal Plates; Vulcanized Rubber; Celluloid; Gold and Silver; Selection and Arrangement of Teeth; Temperament; Temporary Work; Adjustment in the Mouth; Regulating Teeth. The book is the result of forty years' experience in the laboratory.—*Ed. in Southern Dental Journal*.

Drilling Porcelain Teeth.—A cavity may be prepared for filling in a porcelain tooth by the following simple process: Grind out a smooth surface with a small corundum-wheel, to a depth corresponding to the coaptation of spherical surface of the wheel. Invest the tooth in plaster so as to hold it firmly, and then sharpen a small engine bur to a point one-thirty-second of an inch across. Light blows with this, turning it at the same time after the manner of the sculptor, previously wetting the cavity with a mixture of the spirits of turpentine and camphor, and keeping it so, will enable you to drill a hole in each end of the oval cavity and connect them for filling with the greatest of ease.—*F. B. Buck*, Jacksonville, Fla., in *Cosmos*.

The Process of Invention.—All new music is but the re-arrangement of old melody; so new combinations in former methods may bring harmony out of discord or useful appliances from complications. Improvement in crown-work has been great and constant for several years; but most systems are so intricate that the busy operator will not change his accustomed method of plate-making for the more perplexing methods, which he questions if any are able to accomplish in practical work. I have often been amused at a common remark of an interested patient, who would say, referring to the dental engine, "The man who invented that must have had a big head," little thinking that it, like most inventions, was reached step by step."—C. S. W. BALDWIN.

Another Local Anesthetic.—According to Professor L. Lewin, of Berlin, there is in Africa a plant whose anesthetic power greatly surpasses that of cocaine. The plant is called *Erythropheum Judiciale*, and its active principle is called *erythrophein*. Of course this plant, as its name applies, should be *judiciously* used. It may not "throw cocaine entirely in the shade," as claimed by some; for this is harder to do than is generally supposed. Cocaine should be far more used in general surgery than it is. Amputation can be rendered nearly painless by its judicious use; and incisions in the skin may be quite so. The drug is not yet understood, nor are its capabilities appreciated.—*O. J. Dental Science*.

Copper has the reputation of being a great consideration as a component of dental alloys. I am of the opinion that this will prove to be another fallacy, though I confess it is a little hard for me to give up my prejudices in favor of it. It is unquestionably true that alloys made without it do most excellent work, and, moreover, they show, if heavily silvered, the same effects which have been so generally credited to copper.—*A. Morsman in Archives*.

For Our Patients

LITTLE JACK HONOR.

Little Jack Honor
 Sat in the corner,
 Eating a morsel of nice brown bread;
 "Have some pie or some cake?"
 "Nay, not I," with a shake
 And a toss of his nice little head;
 "For this bread will make bone,
 And white teeth like a stone,
 That will neither grow soft nor decay;
 But rich cake and rich pie,
 Sure will break, by and by,
 My good health, and that never will pay."

BETTY M'MOUTHER'S VISIT TO THE DENTIST.

From Scottish Nighs.

CAMLACHIE, February, 1888.

Dear Peggie:—I Write this jist to let you ken that I hae been to the dentist you recommended to me. I wish ye were here till I could tell ye a' about it, but as I'm no likely to see ye for a lang time, I maun try an' tell ye in this letter hoo I got on. Weel, firstly, when I gaed in he was unco kind to me, especially when I mentioned your name. He cam' forrit an' shook haun's wi' me, an' spak' sae kindly, it jist brocht my heart to my mooth, an' wis a'thegether sae pleasant that, fegs, I felt quite inclined to tak' him round the neck an' gie him a bit kiss. Afore I could mak' up my min' he says to me, "Ye nicht jist tak' aff your things;" but thinkin' he wis gaun ower faur, I says to him, "There's nae need for that, shairly; I've jist cam' on purpose to insult ye." Wi' that he changed a' in a meenit an' drew himsel' up, an' says, "Insult me! What for?" "Aboot my teeth," I says. Wi' that his face reddened, he scartit his heid a meenit, an' then brak' oot into sic a fit o' lauchin'. I says, "What's in that to lauch at?" "Oh, excuse me," says he, "I took ye up wrang." The fac' wis, Peggie, I used the wrang word. I should hae said, "I've cam' to assault ye aboot my teeth." So then he says, "A' richt, sit doon in this chair." An' sicna funny chair it was. It had sae mony curious-lookin' things aboot it, I wis quite frichtit to sit intil't. Hooever, he had a kindly way wi' him, an' sae I wis persuaded an' doon I sat. Weel, woman, scarcely had I got intil't till he wid hae my bannet aff. Weel, jist too see hoo faur he wid gang, I took it aff, an' he laid it doon. I wis wonderin a' the time if he wis merrit, an' wishin' I had spiert at ye aforehaun. Syne he drew oot a lang thing frae the side o' the chair, an' pit his fit on 't, an' awa I flew up near to the roof. I screighed oot like ane gyte, an' jumpit clean aff on to the flair; an'

jist in time, or I'm quite shair I should hae been crushed into a jeely again' the ceilin'. "What's the matter?" says he. "Maitter!" says I, "I ken fine something 's gaen wrang wi' yer machinery. What did ye want to hoist me up that way for?" "I jist wanted ye in the best poseetion," he says. I wisna very shair aboot him an' his poseetion; in fac', by this time I felt shair he had some design upon me; but I didna like him to think I was feart for him, sae after he had showed me a' the ways o' workin' it, I took courage an' doon I sat. It wis a wonderfu' chair. He had it a' fitted with springs. He could sen' ye fleein' awa up, or let ye slide awa doon. He could turn ye to the richt or to the left. He could bend ye forrit or lay ye straucht oot on yer back. "Weel," he says, "show me the tooth that's aching." Sae I showed him ane o' ma jaw teeth, an' he said, "That's ane o' yer moulder's teeth." Hoo he kent aboot the moulder is mair than I can unnerstaun, as it's mair than six months sin' I gied him up. Sae I telt him, "it's naething o' the kin'." Hooever, he was gettin' awfu' short like by this time, an' he says, quite brusque like, "Alloo me to ken better, it's just one o' yer moulders." Sae I let him hae his ain way. He says, "Dae ye want it oot?" an' I says, "Wil't be sair?" He says, "Raither, a little;" but if ye like I'll gie ye the gas." "What does that dae?" I says. "Oh," he says, "ye go to sleep, an' when ye wauken up the tooth 'll be oot." Sae I thocht that wad be the best way, an' said sae. Weel, then, he brocht a big black bag attached to twa bottles, an' says, "Shut yer een." Then he placed it on my face an' squeezed it hard doon, sae that I could hardly draw ma braith. Wi' that I up wi' ma hand to tak' it awa, but he held it on, sae I kickit oot wi' a' my micht, an', losh me! there was sic an awfu' strammash. I had kickit ower a table and sic a lot o' instruments. He wis awfu' angry, an' said a bad word. I could hear everything, but couldna move. That gas had left me quite po'erless. He took out the praps he had atween my jaws, and says, "I canna loss ony mair time wi' ye." Sae I says, "Ma tooth's no' oot yet." He says, "Hoo can it be when ye 'll no' sit still; dae ye want it oot or no'?" "Can ye no' dae onything else for't?" "Weel," says he, "let me look at it again." Then he began tappin' awa' an' tappin' awa' at my teeth, an' askin' "Is that yin sair? is that yin sair?" I say, "I telt ye at first there's only ane sair." "Yes, yes," says he; "but I want to ken what sort o' pan's in 't." I says, "Awa', man, hae ye never had toothache?" He says, "Come, ye maun sit still till I examine it wi' a probe." Then he brocht a thing like a fishin' hook wi' a lang handle, an' began scrapin' aboot; an' a' at ance he stuck it clean awa up into the nerve. I faintit clean awa, and kent nae mair for aboot an oor. Ye talk aboot the torments o' the place below; but,

gin yon is some o' their high jinks, I hope I may hae nae teeth left when I dee to gnash in torment. When I cam' to mysel' he wis bathin' ma face wi' cauld watter, an' then he gied me a gless o' brandy, an' telt me to drink it up. I wadna tell this to onybody but yersel' : but when I sat up I felt my face bleeze up like a coal fire—dae ye ken? he had a' the front o' ma dress undone. I jist says to him, "Weel, I'm astonished; but if this is the way ye dentists treat fouk, I'm dune wi' ye." "Toots, ma woman, ye're faur ower nervous. Ye maun alloo me to pit a dressin' in yer tooth; ye canna gang awa wi' t in that condition." I says to him, "Ma fegs, ma man, I think yer better up at undressin' than dressin', as faur as ma experience gangs." Wi' that he got awfu' mad an' says, "Ye maun haud yer tongue an' listen to me." So he started an' flyted on me like an auld fishwife. He said he could fill the tooth weel enough if I wad let him dae as he likit. He went on to explain he could kill the nerve with arsenic, but he was feared it would cause inflammation in a period o' nostrum, or something o' that sort. If he had the nerve oot, he'd pit a known conductor in the canal—ye never heard sic blethers, as if ma mooth wis a sluice, an' each o' ma teeth a telegraph office. Hooever, I jist let him gang on. He spoke o' enamelling dentine wi' cement, an' said decay was caused by no' keeping the mooth clean. Sicna insult. He offered to sell me teeth brushes and pootherers, an' a' sorts o' things; but I jist telt him I would see aboot it next time. He showed me all kinds o' fillings—white and black and gold—an' said gold wis best, and telt me hoo carefu' he'd hae to be in daein' t. He said I'd hae to be awfu' steady or he wad cough or dam it a'thegither; an' that he had an engine for workin' a drill that could cut a' the decay oot in a meenit, and he wou'd knock the gold in wi' a chisel an' a mell, and smooth it a' doon wi' a grindstone. By this time I could easily see the man wis de-mented, an' I thocht it best to humor him. He said, "I'll pit a dressin' in yer tooth in the meantime." I let him dae it; then I got up an' on wi' my bonnet, an' wis hurryin' aff when he says, "Had ye no' better mak' an engagement?" So I says, "Very well." "Can ye come on Thursday at 10?" says he. "Yes," I says, "that will do nicely;" an' bade him good-bye. He never charged me onything, altho' I had my twa-and-sixpence ready. I suppose he was black ashamed and affronted efter keepin' me three mortal hours, wi' ma linen stickin' to ma back wi' sheer fricht, an' near pushinin' me wi' brandy to the bargain. I'm glad to say I've never had a stoun' o' toothache since, an' them that catches me within a yaird o' a dentist's door may grind ma feet into tooth poother, mak' the hair o' ma heid into tooth brushes, ma nails into tooth picks, tak' ma jaws for dissectin', an' sell ma teeth for fause anes. But I am tired, an' must now close.

Yours truly, BETTY McMOUTHER.

Editorial.

WORK FOR THE NERVOUSLY EXHAUSTED.

Many a professional man, dying of nervous exhaustion, might find relief from being obliged to go to work. For such persons

“Labor is rest and pain is sweet,”

if it is a labor that forces him out of his beaten track, though it be with repugnance and mortification. Absorbing work, which relieves mental strain, perplexities and worryment, is recreation; while to such persons inactivity is death.

We know that the general prescription is absolute retirement and perfect quiet. “Sixteen hours out of each twenty-four on the bed” was the prescription of our own eminent physician, when we had sunken into almost helpless nervous exhaustion, some time ago; and we tried it to almost the verge of the grave. Forcing ourselves into labor foreign to our usual employment, we gradually rallied. You will laugh when we tell you what it was. The details and perplexities of our dental depot was what had brought us down; our recreation was visiting saloons, especially on Sundays, to detect them in the violations of their license and prosecuting them before the court. With one or two men as assistants we would mature three to six a week, and generally succeeded in closing them.

There are excessive workers who should go to bed; but there are others who should be kicked out of bed and set at work. Most of the nervously exhausted will die if left alone. Their inclination to house themselves, and to be petted and waited on like babies will kill them, and it nearly kills their friends who are subject to their whims. No, no; this is not the atmosphere, the surroundings, the medicine, the attention for the nervously exhausted. You can kill them with kindness, but you can cure them by tearing the house down from over their heads.

While a physician, we had a patient who was bed-ridden. Her house caught fire, and she was carried out and placed in an out-house on straw, poorly covered and exposed to inclement weather for several days. The rain coming through the roof would wet her, and her food was the coarsest. But the change cured her.

Many professional men have too many ailments of the spleen, too many devils of the imagination, too many self-conceited notions that enslave them. Their passions are too excitable, and their nerves are strung on wires; their brain is too hot, and their pulse too quick. It is enough to kill a dozen wives to wait on them, and their children flee from them as from a lunatic. Away with such nonsense. Get out of such a nest of thistles. Straighten up, and deal with yourself as you would with any other ordinary mortal.

The professional man who buries himself in his business till he is suffocated is a fool. No man has a right to destroy himself either for selfish ends or for the benefit of others. He can do more good, acquire more renown and cash, and live longer in vigor, happiness and usefulness, by weighing coolly his resources, using them intelligently and enjoying them continually. But if he is already nervously exhausted, or rapidly becoming so, let him stop where he is. Not to become physically inactive; but let him look about him for some side show, some diversion of spirit, mind and body, or for some physical employment that shall strengthen his nerves, invigorate his digestion, develop his muscles, and give him tone, brain, breadth—healthful expression to his thoughts, to his passions and to his life-current.

The Surroundings of the Dental Chair.—These are too often monotonous, if not unpleasant, or positively disgusting. The wall is bare, dingy and spotted, spider webs are in the corners, the window is dirty, and the look outside is offensive. The floor is not well covered and clean, the wall paper is cheap and old, the paint needs renewing, and the atmosphere is musty. A multitude of horrid instruments are in full view, the spittoon is unsightly, if not filthy, soiled napkins are in sight, and there is a dusty and unkept appearance in every direction.

How easy to keep most of the instruments hidden, and to have those that must be used, bright and clean; a beautiful spittoon does not cost much, and it costs little to keep it clean and sweet; there is no excuse for dirty napkins to be in view, or anything else that is dirty. Of all places, the dentist's room, especially the surrounding of the chair, should be attractive and free from offensive odors. It should be as inviting in every way as possible. A nice, clean napkin under the few polished instruments that must be used is a pleasant relief. The chair itself should be a perfect ornament. To have the instrument case attractive, the swing tray beautiful, and little ornaments and pictures nestling about to catch the eye of the patient, as the head is turned here and there, is appreciated.

National Association of Dental Examiners, Louisville, August 27. Joint meeting of the Georgia and East Tennessee, Dalton, Ga., August 22.

Dr. Lang should be thankful for so much gratuitous advertising he has received from the Michigan Society. They have made him a hero, and fairly lined his pocket. And we rather think this is merited.

Dr. Grimes, of St. Louis, seems to have gotten himself into much odium by injudicious advertising. Is this "injudicious" the word, or should we put it a little stronger? It looks like a case of false pretenses.

DISPUTED BILLS.

If patients are informed, even in a general way, what expense they are incurring, specially if these are unusually expensive operations, there will be few bills disputed. The more we confide to our patient the nature and expense of our work while we are doing it, and sometimes even before it is commenced, the better they will be prepared to see our bill. And they will pay it much more gracefully if presented immediately.

Still, there will be disputed bills; then compromise is generally better than a lawsuit, or even than the payment under protest. There will be some too unreasonable to compromise on anything like reasonable terms; but even with these, a dispute is often more costly than the loss of your bill. Then, too, sometimes we "professional men" are blind, except to our side of a dispute. We are not very often willing to "put ourselves in his place." Our patients have rights, and a view of the case, which we are bound to respect; and if we respect their judgment as well as our own we may use him some day to our advantage, and not unfrequently he will voluntarily do us much good; we shall not unfrequently find them our best friends. But what shall we do with one we never want to see again, him, nor his friends, nor any one like them? Kick him out of the office? No; better have the good-will of a dog than the ill-will. And though he is incorrigible as a dog, yet let him pass on, without adding anything to his displeasure. The worst we can do for our bitterest enemy is to let him alone. Often the best thing financially, as well as otherwise, is to "heap coals of fire on his head."

And yet there may be a case where a lawsuit is our only vindication; but, let us remember, it is almost always an expensive luxury.

Social Life of Dentists.—Every one needs some relaxation after the racking brain and muscular work of each day. I do not mean, when I recommend society, that you, as professional gentlemen, shall follow all the frivolities of fashionable life. You cannot afford the time or expenditure necessary to meet such demands. But I mean, when I recommend society for culture, that it shall be among good, sensible people, who recognize the fact that the night was made for sleep. This class is the thinking class, the reading class, the intelligent class, that make men sound, sweet and strong. These are the people who move the world and hold it in equilibrium. This circle comprises the busy people, who are working in churches, in reforms of all kinds, in the sciences and arts, and the broad fields of literature and education. They are the people who are living to some purpose, and in this class I recommend you to find your friends.

ADVERTISING.

EDITOR ITEMS:—Do you not think it a disgrace to the profession to have the dental colleges of this city head the quack advertisements in all our daily papers? By replying to this query in your dental journal you will confer a great favor on

ONE OF THE PROFESSION.

Yes; we believe many dental colleges disgrace themselves and the profession by their advertisements for clinics. For other members of the profession to follow their example isolates them from dental societies.

And yet we all advertise. This is right, though we should so advertise as not to lower our dignity or offend the good taste of the most intelligent portion of the community. This requires great discretion and critical judgment. Successful advertising is a science.

“Well, well,” says one of our esthetic dentists, who never does more than to have his name on his door knob, “then you advocate advertising?”

Many years ago, we sung with some others a song entitled, “We all wear cloaks.” We are often reminded of this song, in seeing the many ways *we* have of advertising—*we* who do not advertise.

Say what we will, we each wear a cloak of some kind. With some of us it is so esthetic and proper we appear rather the more dignified for having it, and the community are attracted to us by it. Others wear cloaks “so ragged and torn” it is a disgrace, and they repel the better part of community; or, even if it is “seamless from top to toe,” it hides but a pauper’s dress.

But why should we make such a comment on so entirely proper and timely and just grievance as our correspondent’s complaint? We must all admit that where there is a dental college there is generally this distasteful grievance. It is an embarrassment to dentists in its vicinity.

Perhaps we do wrong to intimate that we all advertise,—in some way,—that “We all wear cloaks.” But they should be respectable cloaks, cloaks that will really improve our appearance.

Many of the advertisements of our dental colleges are not respectable; even the *association* of their ads. are of rank odor, being generally found in company with our “cheap Johns” and most disreputable dental notices.

The dental colleges must have clinics, just as surely as the dentists must have patients. But our college “Professors” should not resort to any method that would be a disgrace to ordinary dentists. The wants and standing and clinical work of some colleges are so well known they do not need to advertise in any ordinary sense of that

term. In like manner, the publicity and good workmanship of some dentists are so "read and known of all men" and women in their vicinity, they do not have to advertise,—that is, to the superficial eye.

We were a dentist for thirty years, and yet never advertised,—that is, "scarcely never,"—and yet we never spent a year without advertising from one to two hundred dollars worth. "How not to do it," was our continual motto. How not to advertise and yet keep favorably and prominently before the people; this was one of our secrets of success. "We all wear cloaks."

Most dentists would disdain having a card in the newspaper; but they will have a report of a case written out by themselves, or by some friend that can "do it" better, though it costs a dollar a line. Others would not stoop so low as this, but if the editor does "chance" to mention some favorable fact connected with their business they would think it mean not to slip a V into an envelope to his address, thanking him for his "honorable mention." By another dentist this would not be thought just the thing to do, but he might just intimate in a very gentlemanly way, after it was done, that he should be pleased to return the favor,—should any of his family have the necessity to visit his office. Perhaps this would be too much for the sensitive feelings of our asthetic dentist; but, if by any means unmentionable, any of the family of such an editor should become his patient he would really prefer to make them a present of the work; of course we should be surprised, and mortified, and express to our friends disapprobation, if the editor should editorially refer to such work with marked favor!—"We all wear cloaks."

Some extend their gratuitous favors to the clergy and to the physicians. "We can easily wash each others hands, you know." In other words, "We all wear cloaks."

Some advertise by giving valuable information to the public, though it costs a stipulated sum to publish it as reading matter. Of course they feel that this charge is an injustice, but they are determined to educate the public. Others are smart at lecturing. Superior social qualities are the fort of some, while others seek influence as politicians. Others, again, are public spirited enough to be willing to be put in the city council or on the school board or other public committees. I knew a dentist once who became famous for his attention to the teeth of the scholars of the public schools, giving special attention to the young ladies of the higher grades; and he charged nothing for these attentions,—unless they were really in want of his services. "We all wear cloaks."

How many hundreds of ways there are of getting and keeping before the people, and many of them perfectly proper,—if when you

have drawn them you can prove their benefactor. But advertising is an art. It needs wisdom, as work needs skill. Why should not wise advertising and skilful work go together? With both we must be "as wise as serpents," but "as harmless as doves."

"We all wear cloaks," but a cloak is not a bad thing to wear, if it is made attractive, and covers nothing shabby or harmful.

DR. W. H. EAMES.

(See Frontispiece.)

Dr. W. H. Eames was born at Auburn, N. Y., in the year 1828. His father, George Eames, was a man of strong individuality and upright character, whose remarkable ingenuity, skillfulness and perseverance were all called into action in the wilds of central New York, where he had gone with his father and brothers from their home near Boston to seek fortunes in what was then the far west.

So it is not strange that these same qualities should be strongly marked in the character of his eldest born.

While this son was still very young, his father moved to a village near Rome, N. Y., where the boy grew up with such schooling as could be had in the neighborhood, and afterward taught there for two years.

During the years 1850-51 he attended a course of medical lectures at the Michigan University, intending to practice medicine; but, becoming interested in dentistry, gave up his first plan and attended the Ohio Dental College during the term 1850-51 and graduated.

After spending a short time in the office of Dr. John Allen in New York city, he returned to Ann Arbor, Mich., to the office of his preceptor, Dr. C. B. Porter. He also practiced in the neighboring towns, and at Clinton, Mich., met and married Miss Laura Schofield, his estimable wife.

He remained in Michigan until 1857, when he went to Lebanon, Tennessee, and settled down to a comfortable practice with every expectation of remaining there. The civil war soon rendered this impossible, and he went to St. Louis, where he has since remained in active practice.

He was one of the organizers of the Missouri Dental College, and a member of the first faculty, filling the chair of Mechanical Dentistry, and was subsequently elected Dean of the faculty. He now occupies the chair of Institutes of Dental Science in that college. He was active, with Dr. H. Judd, in starting the *Missouri Dental Journal*, now the *Archives of Dentistry*, and had charge of the mechanical department of that journal. When Dr. Judd retired, Dr. Eames took his place as editor. He is at present the editor-in-chief of the *Archives*,

and is always ready to take an active part in whatever tends to the advancement of the profession.

E. E. C.

St. Louis, July 18, 1888.

EDITORIAL BOASTING.

It is a pity that, in so many instances, when a new journal is started or a new editor takes the helm, there is an immediate assumption of superiority. This might be expected of ignorant, bigoted, shallow-brained novices, but for the new fledged editor of the *Independent Practitioner* to speak as though by common consent he had been chosen commander-in-chief of the whole editorial dental fraternity, is inexcusable. Before belittling all other dental journals, some of which have commanded the respect of the profession ever since he was a baby, let him learn what it is to edit a dental journal, and prove by what he accomplishes that he is, at least, the equal of his seniors.

His readers will judge him by his work, and not by his effort to build on the ruin of his contemporaries. Instead of calling these mere advertising circulars of local houses—mere “trade journals of the day” whose purpose is “the distribution of monthly catalogues,” and boasting that *he* is to stride the great Atlantic and be the International Editor of civilization, let him show, by much study and growth, the tact and talent of his predecessor, and consider that quite glory enough.

COLORADO STATE DENTAL ASSOCIATION.

The second annual meeting of the Colorado State Dental Association was held at Denver, June 5th to 7th, 1888. The following officers were elected for the ensuing year: John W. Granus, president; P. T. Smith, first vice-president; J. H. Beak, second vice-president; H. P. Kelley, recording secretary and treasurer; J. N. Chipley, corresponding secretary. There was a large attendance, and much interest manifested. The Denver members gave a banquet to visiting dentists. The next meeting will be held at Denver, commencing on June 5th, 1889.

H. P. KELLEY, Recording Secretary.

Dentists of Eastern Iowa met at Marion, last June, and determined to form *The Eastern Iowa Dental Association*. Their first session will be for two days, at Cedar Rapids, commencing September 10.

We have fully as much hope for him who educates himself by his own manly efforts, as for him who has his way paid for him. The necessity for self-support disciplines the mind and hand for graver professional responsibilities.

Cocaine at the Late Illinois Dental Society.—Cocaine, as an anesthetic, received a very decided black eye by the dentists assembled there last week. A member of the association, during the morning session at the Crescent Rink, was quite free in its use in operating on patients, and came near causing the death of one lady to whom it was applied. Later, at the afternoon session at the Opera House, the subject of its use was hotly discussed, and the bold operator handled without gloves. Indeed, so bitter was the discussion that the minutes were stricken from the records. It is safe to say that the drug will be rarely if ever applied by any of the members of Illinois State Dental Association.

A Method of Capping Exposed Pulps that has been very successful with the writer consists in leaving *all* the disintegrated dentine around the pulp. If much inflammation—pulpitis—it is controlled by topical applications of pure carbolic acid, to which has been added about ten per cent of oil of cloves.

Dr. Norman Kerr, an eminent physician of England, believing the statements of temperance people to be extravagant, that 60,000 people die annually from the effects of strong drink, began as early as 1870 a personal inquiry, in connection with several medical men and experts, expecting to quickly disprove them. According to their deductions the latest estimate of deaths of adults annually caused through intemperance is: In Great Britain, 120,000; in France, 142,000; in the United States, 80,000; or nearly half a million each year in three countries aggregating a population of one hundred and twenty-two millions. He finds these estimates below the true figures.

The Trade Guide of Louisville, Ky., comes to us with the compliments of Dr. Hooper. What a wonderful country these Southern States are becoming! Among the wonders of its wonders is the growth and advantages of Louisville.

This is the city in which the joint meeting is to be of the Southern and the American Dental Associations, are to meet August 28. Come, brethren, let's all go.

The National Association of Dental Faculties will meet in a Fifth Annual Session at the Gault House, in the city of Louisville, Ky., at 9.00 A. M., on Monday, August 27, 1888.

In order that this meeting may be dispatched before the Southern and American Dental Associations get to work, it is hoped that the entire membership may be represented promptly at the hour indicated.

Indianapolis, Ind.

JUNIUS E. CRAVENS, *Sec'y*.

Spelling Reform in Prussia.—The Prussian government has made official a simplified spelling. So the world does move. Shall the English speaking nations be the last to enter the list? No civilized language is spelt so absurdly, and yet there is no language in advance of it in other respects.

To Preserve a Syringe Piston.—If the leather on the piston of a hypodermic or other syringe becomes dry, which it should never be allowed to do, soften it in cold water, never in warm, then soak it well in glycerin, and keep a little oil on it.

Lady Dentists are increasing. In the Iowa report we read: Dr. Ritchey, our lady dentist, of Onewa, and one of the Executive Committee, was present at all the meetings, and by her close attention to the papers and intelligent questioning of the clinical operators demonstrated a mind of high order, and a clear perception of the principles of dental practice.

Scientists claim that smoking injures the sight. But this is not true. The boy with a stump in his mouth can see his father smoking ten streets off.

Legal Status of Dentists.—The Council of St. Louis voted to require \$10 tax from each city dentist, claiming they were common laborers. This was resisted, and a city court has just decided the illegality of the tax, because dentistry was a profession, a branch of the medical profession.

Vulcanizer Packing.—Heavy pasteboard makes a good packing for vulcanizers. Where vulcanizers leak, dust on a little corn starch and you will find it effectual in stopping the leak.

IT SEEMS CRUEL to kill a nerve by a blow from a mallet on a sharp pine stick; but if dexterously done, the only astonishment of patients is that it did not hurt, or so little that they cannot believe the pulp is removed. It is not necessary that the blow should be severe or that the splint of wood should be large. The pine stick, sharpened to a point, should be just large enough to be forced into the canal of the root, and a gentle blow will instantly throw out the pulp. A splint of bamboo or other strong, elastic wood is better than pine.

Bad Smells.—It is the opinion of the scientists that bad smells are not in themselves very injurious to health, but the bad company they bring with them in the shape of organic germs does all the mischief. Sulphuretted hydrogen, "the essence of sewerage," is not perceptibly deleterious to health. When produced in the laboratory by mixing pure chemicals it is harmless, but when it comes from sewage it brings with it microbes that are intensely poisonous, though these microbes alone have no perceptible odor.

Iowa State Dental Society.—List of officers for the coming year: President, J. B. Monfort, D. D. S., Fairfield; Vice-President, L. K. Fullerton, D. D. S., Waterton; Secretary, G. W. Miller, Winterset (now of Des Moines); Treasurer, F. M. Shriver, D. D. S., Glenwood. Executive Committee—F. R. Ross, Cedar Rapids; Jessie M. Ritchey, Des Moines; C. Thomas, Des Moines. Next place of meeting, Des Moines.

GEORGE W. MILLER.

Careless Editing.—A contemporary allows a correspondent to appear in the following style:

“Having for some years used Pumice Stone; in which I have made various castings. I take pleasure in recommending it as the best material I have ever seen for mould purposes. It will stand the heat of moulten steel.”

It is less labor to let “things slide”—“O, it will be understood,”—than to carefully correct the manuscript.”

The Tendency to a Globular Form in amalgams is as fallacious as its tendency to crumble or its failure to properly “set.” By ignorance and mismanagement it may crumble by excessive dryness or use after it has almost set, and by using a large excess of mercury, especially by adding mercury to soften that which crumbles because too long mixt. And so with this tendency to a globular form; we presume by a great excess of mercury such a thing is possible, but not with an amalgam properly mixt.

Impacted Teeth.—These sometimes give trouble, specially when artificial teeth are worn. A mysterious, hard swelling comes on or near the ridge under the plate. Time and again a little is scraped off the plate to relieve it, but only to give a short relief. Often such a trouble diagnoses an impacted tooth. With a sharp lancet cut through the skin or thin muscle of the protuberance, and you will come to a hard substance which will prove to be a partial or a whole tooth. Sometimes such impacted tooth is quite difficult to extract, though generally it is but a few minutes work if you have an adapted instrument.

The Announcements of State Societies.—These are becoming very artistic. The Missouri and the Wisconsin Societies have each sent out beautiful programs, and the contents show great pains to bring about interesting and profitable meetings.

To Kill Tooth Pulp.—Dr. W. A. Johnson, of Peoria, Ill., says if arsenic one part, cocoaine four parts, lanoline five parts, be applied to the pulp while aching, it can be removed without pain.

Azone is an active state of oxygen, and is distinct from ordinary oxygen, which is the element in its passive state.

Miscellaneous.

To Prevent Steel from Rusting.—Immerse the steel or iron instruments in a solution of carbonate of potash for a few minutes, and they will not rust for years, not even when exposed to damp atmosphere.—*Southern Dental Journal*.

Epistaxis.—Persistent epistaxis is frequently overcome by irrigating the nostril with very hot water, as high as 150° Fahrenheit. The process is not painful, and often arrests the flow in a few minutes. If not, it may be repeated.—*Medical World*.

A Good Modelling Compound.—Take gum kauri, 12 oz., stearine, 16 oz., and French chalk, 24 oz. Melt the stearine in a tin dipper, which has been previously heated and the tin run off; add the gum kauri and mix thoroughly; then add the chalk.

Cleaning and Polishing Powder.—A good powder for cleaning jewelry, silver watch-cases, etc., is made by mixing about four parts of whitening with one of rouge, using with alcohol or water; this, it will be found, is easily brushed out of crevices, engravings, etc.

Offensive Breath may often be cured by abstinence from meats and alcohol for a while; all the necessary elements of food may be obtained from fruits and grains, even in a more concentrated form than in flesh. We need not so much nitrogen.—*Medical World*.

Roaches, Red Ants, etc.—These may be driven away by the persistent use of plaster-of-Paris. Wherever vermin congregate there use the plaster. Even flies seem to avoid it.

Liquid Blacking.—This blacking is made by digesting in a close vessel at a gentle heat and straining:

Lampblack.....	1	drachm.
Oil turpentine.....	4	"
Methyl alcohol.....	12	ounces.
Shellac.....	1½	"
White turpentine.....	5	drachms.
Sandarac.....	2	"

Ink Stains.—A writer says he has removed the very worst ink stains from carpets of very delicate colors by rubbing them with skim-milk, and, when they are almost effaced, washing them with a cloth rung out in boiling water without soap. Then cover the plate with a dry cloth and let it remain so for a day.

Creaking Hinges.—In the absence of plumbago, those who are annoyed by a creaking hinge on a door may be glad to know that by rubbing the end of a common lead pencil upon the offending part it will immediately be reduced to absolute silence. Black lead is one of the best lubricators known.—*Scientific American*.

MY BOY, DO YOU SMOKE?

The United States Navy annually takes into its service a large number of apprentice boys, who are sent all over the world and taught to be thorough sailors. It has been the policy of the government since the war to educate the "blue jacket," upon the principle that the more intelligent a man is the better sailor he is likely to become. There is no lack of candidates for these positions. Hundreds of boys apply, but many are rejected because they cannot pass the physical examination. Major Houston, one of the Marine Corps who is in charge of the Washington Navy Yard barracks, is the authority for the statement that one-fifth of all the boys examined are rejected on account of heart disease.

His first question to a boy who desires to enlist is: "Do you smoke?" The invariable response is, "No, sir," but the tell-tale discoloration of the fingers at once shows the truth. The surgeons say that cigarette smoking by boys produces heart disease, and that in ninety-nine cases out of a hundred the rejection of would-be apprentices on account of this defect comes from excessive use of the milder form of the weed. This is a remarkable statement, coming, as it does, from so high an authority and based upon the results of actual examinations going on day after day, and month after month. It should be a warning to parents that the deadly cigarette is sure to bring about incalculable injury to the young. A law passed restricting its use to the dudes would not, perhaps, bring popular disfavor, because it might reduce the number of these objects about our streets; but boys indulging in the cigarette ought to be treated to liberal doses of "rod in pickle" until the habit is thoroughly eradicated.—*Scientific American*.

A new process for preserving liquids in arresting fermentation has been introduced and is now at work in New York. Briefly described, the new process consists first in exhausting the air from the fluid and substituting in its place carbonic acid gas. Beer, fruit juice, wine, cider and milk can be kept in an unfermented state for any length of time by this process. One of the practical and valuable features of the process is that all the liquids named can be put up in siphons and supplied in this most convenient form to the consumer. The latter can then use any desired quantity of the contents of the siphon, and keep the remainder intact for future use. For invalids and those who do not care to use alcoholic liquors, the process permits the pure expressed juice of the fruit being preserved with its natural flavor and bouquet. The value of pure carbonated milk for ready consumption will also be appreciated by physicians.

Cement for Bottles.—A new cement for bottles containing volatile liquids, which is easily prepared and applied, and which is said to prevent the escape of the most volatile liquids, is composed simply of finely ground litharge and glycerin, and it is merely painted around the joint between the bottle and the cork or stopper. It quickly dries and becomes extremely hard, but can be easily scraped off with a knife when it is necessary to open the bottle.—*Pacific Record*.

A TRICK WITH FIGURES.

The following mathematical trick, from *La Nature*, although not new, may be revived for the benefit of those who are unacquainted with it. It never fails to mystify those who do not understand it.

Tell a person to select any even number of figures, and, without letting you see them, to write them down and then place under them the same figures in reverse order. Thus, for example:

943518
815349

This done, ask him to add the two numbers, and to give you the sum, less any figure which he may choose to reject, and the space occupied by which must be left blank or shown by a hyphen. For example, 17588-7.

Putting on an inspired air, you now assert that the figure omitted is 6. If you prefer, you can let the person subtract one number from the other, and then tell him the omitted figure with the same ease.

The trick is simple, and the explanation of it can be understood by any boy who has studied arithmetic. The sum of a number and the same number reversed is a multiple of 11, and their difference is a multiple of 9. Now, in multiples of 11, the sum of the even figures is equal to that of the odd ones. Applying this rule to our example, 17588-7, and representing the unknown figure by x , we have $x+8+7=1+7+5+8=21$. A simple mental calculation gives $x=6$. Where the number of figures in the product is an even one, the sum of the first two or first three will equal the sum of the last two or last three, and so on.

Proceeding with the difference, which is a multiple of 9, the sum of the figures must itself be a multiple of 9. Taking our example, 1-8169, and adding the figures, we obtain 25; but as this is not a multiple of 9, we have to add 2 to obtain the multiple, and this was the figure rejected.

RHEUMATISM.

The surroundings of a patient suffering from rheumatism are a matter of no little importance. The *Boston Journal of Health* says: Free ventilation should be secured, but without draughts, and the temperature kept between 68° and 70° Fah. The patient should be clothed in flannel and lie between woolen blankets. His covering should be light. An excess of bedclothing will add to the pain in the inflamed joints, and unnecessarily increase the sweating. It should be a studied effort to spare him any painful movements possible, and every ministration should be gentleness itself. Milk, with seltzer water or lime water, pre-eminently meets the requirements as the principal article of diet during the active period of the disease. If this proves insufficient, or is not well borne, then other light and concentrated food can be administered. Some authorities insist that animal food and alcohol are contra-indicated during the height of the fever. The latter should certainly be prohibited, as a rule; but the patient's diet need not be so much restricted as in other highly febrile disorders. Those who are habituated to the use of stimulants should not be entirely deprived of them.